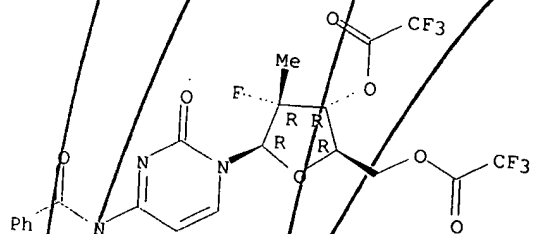
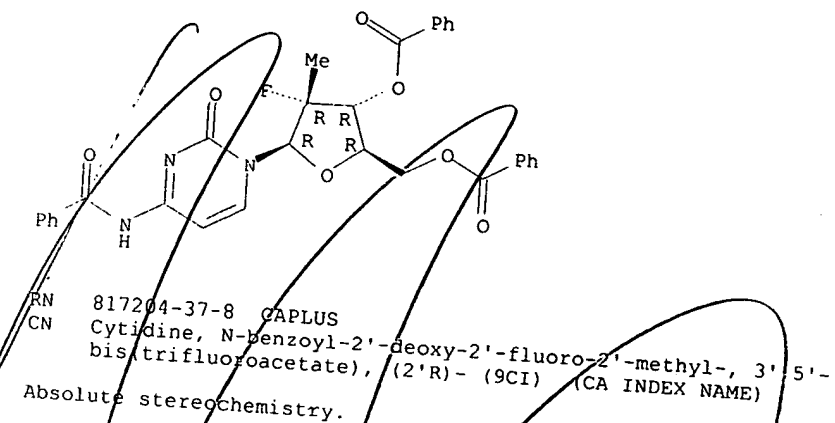


EAST Search History

| Ref # | Hits | Search Query | DBs | Default Operator | Plurals | Time Stamp |
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| L2 | 141 | ("20020198173" "20030120071" "20030144502" "20030153744" "20040006007" "20040014108" "20040059104" "20040063622" "20040097461" "20040097462" "20040101535" "20040102414" "20040167140" "20040191824" "20040229839" "20040248892" "20040259934" "20040265969" "20040266996" "20050009737" "20050026853" "20050031588" "20050075309" "20050080034" "20050090660" "20050124532" "20050130931" "20050137161" "20050148534" "20050164960" "20050215513" "20050227947" "20050261237" "20060003951" "20060014943" "20060035866" "20060040944" "20060079478" "20060110727" "20060122146" "20060122154" "20060142238" "20060144502" "4814477" "5118820" "5405598" "5420266" "5462724" "5703058" "5767097" "6090932" "6130326" "6156501" "6232300" "6239159" "6372883" "6391859" "6455513" "6455690" "6479463" "6495677" "6509320" "6552183" "6555677" "6573248" "6642206" "6677314" "6677315" "6682715" "6683045" "6703374" "6753309" "6787305" "6787526" "6815542" "6897201" "6908924" "6914054" "6962991" "7018985" "7018989" "7081449").PN. | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2007/03/19 18:00 |
| S1 | 2 | "20060199783" | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2007/03/19 13:38 |
| S2 | 2 | "20050009737" | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2007/03/19 13:22 |

EAST Search History

| | | | | | | |
|----|-----|---|--|----|----|------------------|
| S3 | 2 | "20060122146" | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2007/03/19 13:22 |
| S4 | 2 | "20070042939" | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2007/03/19 17:46 |
| S5 | 4 | "20030060400" | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2007/03/19 16:14 |
| S6 | 108 | ("20020058635" "20030050229" "20040023240" "20040067901" "20040072788" "20040110717" "20040214844" "20040254141" "3798209" "4957924" "5026687" "5149794" "5157027" "5194654" "5223263" "5256641" "5372808" "5411947" "5463092" "5496546" "5543389" "5543390" "5543391" "5554728" "5610054" "5633358" "5633388" "5676942" "5711944" "5725859" "5738845" "5738846" "5747646" "5792834" "5830455" "5830905" "5834594" "5837257" "5846964" "5849696" "5869253" "5891874" "5905070" "5908621" "5922757" "5942223" "5980884" "5990276" "6004933" "6034134" "6043077" "6056961" "6348587" "6410531" "6420380" "6534523" "6660721" "6680303" "6777395").PN. | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2007/03/19 16:14 |



=> d his

(FILE 'HOME' ENTERED AT 13:15:49 ON 19 MAR 2007)

FILE 'REGISTRY' ENTERED AT 13:16:05 ON 19 MAR 2007
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2 S L1 FULL

FILE 'CAPLUS' ENTERED AT 13:17:31 ON 19 MAR 2007
4 S L3

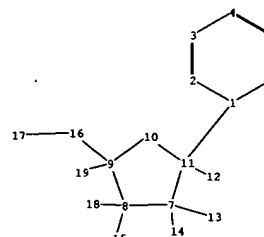
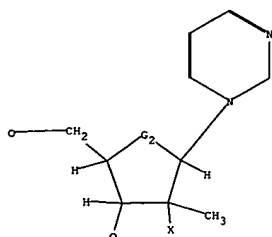
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STRUCTURE UPLOADED
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0 S L8 FULL
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0 S L13 SSS SAM

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STRUCTURE UPLOADED
0 S L15 SSS SAM
11 S L15 FULL

FILE 'CAPLUS' ENTERED AT 14:10:58 ON 19 MAR 2007
6 S L17

L15



chain nodes :

12 13 14 15 16 17 18 19

ring nodes :

1 2 3 4 5 6 7 8 9 10 11

chain bonds :

1-11 7-13 7-14 8-15 8-18 9-16 9-19 11-12 16-17

ring bonds :

1-2 1-6 2-3 3-4 4-5 5-6 7-8 7-11 8-9 9-10 10-11

exact/norm bonds :

1-2 1-6 1-11 2-3 3-4 4-5 5-6 7-8 7-11 7-13 7-14 8-9 8-15 8-18 9-10 9-16 9-19 10-11 11-12 16-17

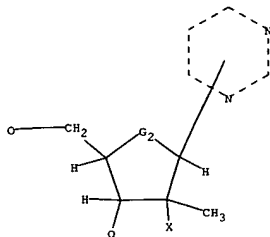
G2:C,O,S,N,Se

Match level :

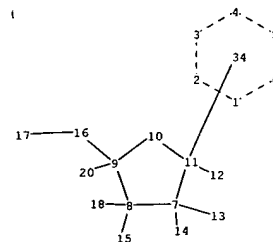
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e 1—
e 2—O
O—e 3

28



e 1-2-25
e 23-26
2-8-3
2-8-27



chain nodes :

12 13 14 15 16 17 18 20 22 23 24 25 26 27

ring nodes :

1 2 3 4 5 6 7 8 9 10 11

chain bonds :

7-13 7-14 8-15 8-18 9-16 9-20 11-12 16-17 22-25 23-26 24-27

ring bonds :

1-2 1-6 2-3 3-4 4-5 5-6 7-8 7-11 8-9 9-10 10-11

exact/norm bonds :

1-2 1-6 2-3 3-4 4-5 5-6 7-8 7-11 7-13 7-14 8-9 8-15 8-18 9-10 9-16 9-20 10-11 11-12 16-17 22-25
23-26 24-27

G1:H,Ak

G2:C,O,S,N,Se

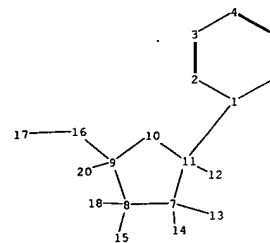
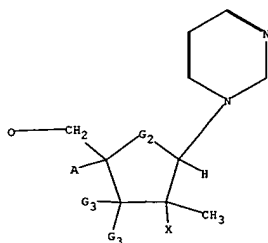
G3:C,H,S,N,Cl,Br,F,I,[*1],[*2],[*3]

Match level :

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15:CLASS16:CLASS17:CLASS18:CLASS20:CLASS22:CLASS23:CLASS24:CLASS25:CLASS26:CLASS27:CLASS34:CLASS



LS



chain nodes :

12 13 14 15 16 17 18 20 22 23 24 25 26 27

ring nodes :

1 2 3 4 5 6 7 8 9 10 11

chain bonds :

1-11 7-13 7-14 8-15 8-18 9-16 9-20 11-12 16-17 22-25 23-26 24-27

ring bonds :

1-2 1-6 2-3 3-4 4-5 5-6 7-8 7-11 8-9 9-10 10-11

exact/norm bonds :

1-2 1-6 1-11 2-3 3-4 4-5 5-6 7-8 7-11 7-13 7-14 8-9 8-15 8-18 9-10 9-16 9-20 10-11 11-12 16-17
22-25 23-26 24-27

G1:H,Ak

G2:C,O,S,N,Se

G3:C,H,S,N,Cl,Br,F,I,[*1],[*2],[*3]

Match level :

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom 11:Atom 12:CLASS13:CLASS14:CLASS
15:CLASS16:CLASS17:CLASS18:CLASS20:CLASS22:CLASS23:CLASS24:CLASS25:CLASS26:CLASS27:CLASS

68/002,316

U/028,753

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PASSWORD:

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* * * * * Welcome to STN International * * * * *

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NEWS 3 DEC 18 CA/CAPLUS pre-1967 chemical substance index entries enhanced
with preparation role
NEWS 4 DEC 18 CA/CAPLUS patent kind codes updated
NEWS 5 DEC 18 MARPAT to CA/CAPLUS accession number crossover limit increased
to 50,000
NEWS 6 DEC 18 MEDLINE updated in preparation for 2007 reload
NEWS 7 DEC 27 CA/CAPLUS enhanced with more pre-1907 records
NEWS 8 JAN 08 CHEMLIST enhanced with New Zealand Inventory of Chemicals
NEWS 9 JAN 16 CA/CAPLUS Company Name Thesaurus enhanced and reloaded
NEWS 10 JAN 16 IPC version 2007.01 thesaurus available on STN
NEWS 11 JAN 16 WPIDS/WPINDEX/WPIX enhanced with IPC 8 reclassification data
NEWS 12 JAN 22 CA/CAPLUS updated with revised CAS roles
NEWS 13 JAN 22 CA/CAPLUS enhanced with patent applications from India
NEWS 14 JAN 29 PHAR reloaded with new search and display fields
NEWS 15 JAN 29 CAS Registry Number crossover limit increased to 300,000 in
multiple databases
NEWS 16 FEB 15 PATDPASPC enhanced with Drug Approval numbers
NEWS 17 FEB 15 RUSSIAPAT enhanced with pre-1994 records
NEWS 18 FEB 23 KOREAPAT enhanced with IPC 8 features and functionality
NEWS 19 FEB 26 MEDLINE reloaded with enhancements
NEWS 20 FEB 26 EMBASE enhanced with Clinical Trial Number field
NEWS 21 FEB 26 TOXCENTER enhanced with reloaded MEDLINE
NEWS 22 FEB 26 IFICDB/IFIPAT/IFIUDB reloaded with enhancements
NEWS 23 FEB 26 CAS Registry Number crossover limit increased from 10,000
to 300,000 in multiple databases
NEWS 24 MAR 15 WPIDS/WPIX enhanced with new FRAGHITSTR display format
NEWS 25 MAR 16 CASREACT coverage extended

NEWS EXPRESS NOVEMBER 10 CURRENT WINDOWS VERSION IS V8.01c, CURRENT
MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),
AND CURRENT DISCOVER FILE IS DATED 25 SEPTEMBER 2006.

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ENTRY

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0.21

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09/982,315

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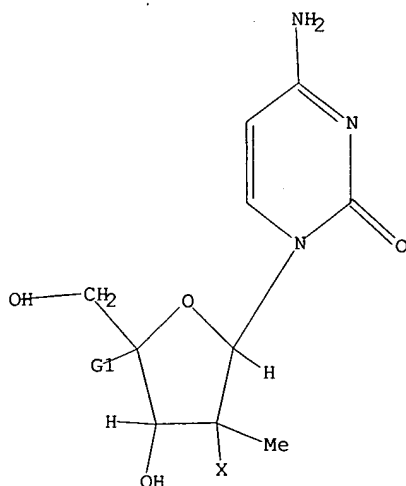
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=>
Uploading C:\Program Files\Stnexp\Queries\10828753species.str

L1 STRUCTURE UPLOADED

=> d l1
L1 HAS NO ANSWERS
L1 STR



G1 H, Ak

Structure attributes must be viewed using STN Express query preparation.

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SAMPLE SCREEN SEARCH COMPLETED - 8 TO ITERATE

100.0% PROCESSED 8 ITERATIONS 0 ANSWERS
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
BATCH **COMPLETE**
PROJECTED ITERATIONS: 8 TO 329
PROJECTED ANSWERS: 0 TO 0

L2 0 SEA SSS SAM L1

=> s l1 full

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09/982-315

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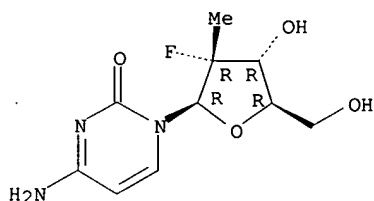
2 ANSWERS

L3 2 SEA SSS FUL L1

=> d 1-2 13

L3 ANSWER 1 OF 2 REGISTRY COPYRIGHT 2007 ACS on STN
RN 817204-38-9 REGISTRY
ED Entered STN: 20 Jan 2005
CN Cytidine, 2'-deoxy-2'-fluoro-2'-methyl-, monohydrochloride, (2'R)- (9CI)
(CA INDEX NAME)
FS STEREOSEARCH
MF C10 H14 F N3 O4 . Cl H
SR CA
LC STN Files: CA, CAPLUS, PROUSDDR, SYNTHLINE, TOXCENTER, USPATFULL
CRN (817204-33-4)

Absolute stereochemistry. Rotation (+).



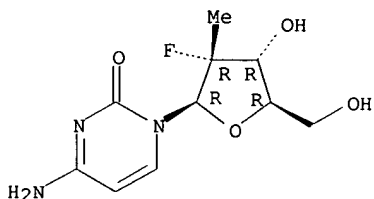
● HCl

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

2 REFERENCES IN FILE CA (1907 TO DATE)
2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L3 ANSWER 2 OF 2 REGISTRY COPYRIGHT 2007 ACS on STN
RN 817204-33-4 REGISTRY
ED Entered STN: 20 Jan 2005
CN Cytidine, 2'-deoxy-2'-fluoro-2'-methyl-, (2'R)- (9CI) (CA INDEX NAME)
OTHER NAMES:
CN PSI 6130
FS STEREOSEARCH
MF C10 H14 F N3 O4
CI COM
SR CA
LC STN Files: CA, CAPLUS, PROUSDDR, SYNTHLINE, TOXCENTER, USPATFULL

Absolute stereochemistry. Rotation (+).



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

4 REFERENCES IN FILE CA (1907 TO DATE)
4 REFERENCES IN FILE CAPLUS (1907 TO DATE)

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097582,515

=> file caplus
COST IN U.S. DOLLARS

| SINCE FILE ENTRY | TOTAL SESSION |
|------------------|---------------|
| 176.45 | 176.66 |

FULL ESTIMATED COST

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=> s 13

L4 4 L3

=> d bib abs hitstr 1-4 14

L4 ANSWER 1 OF 4 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2006:478128 CAPLUS

DN 145:202057

TI Inhibition of hepatitis C replicon RNA synthesis by β -D-2'-deoxy-2'-fluoro-2'-C-methylcytidine: a specific inhibitor of hepatitis C virus replication

AU Stuyver, Lieven J.; McBrayer, Tamara R.; Tharnish, Phillip M.; Clark, Jeremy; Hollecker, Laurent; Lostia, Stefania; Nachman, Tammy; Grier, Jason; Bennett, Matthew A.; Xie, Meng-Yu; Schinazi, Raymond F.; Morrey, John D.; Julander, Justin L.; Furman, Phillip A.; Otto, Michael J.

CS Pharmasset Inc, Princeton, NJ, USA

SO Antiviral Chemistry & Chemotherapy (2006), 17(2), 79-87

CODEN: ACCHEH; ISSN: 0956-3202

PB International Medical Press, Ltd.

DT Journal

LA English

AB β -D-2'-Deoxy-2'-fluoro-2'-C-methylcytidine (PSI-6130) is a cytidine analog with potent and selective anti-hepatitis C virus (HCV) activity in the subgenomic HCV replicon assay, 90% effective concentration (EC90) = 4.6 ± 2.0 μ M. The spectrum of activity and cytotoxicity profile of PSI-6130 was evaluated against a diverse panel of viruses and cell types, and against two addnl. HCV-1b replicons. The S282T mutation, which confers resistance to 2'-C-Me adenosine and other 2'-methylated nucleosides, showed only a 6.5-fold increase in EC90. When assayed for activity against bovine diarrhoea virus (BVDV), which is typically used as a surrogate assay to identify compds. active against HCV, PSI-6130 showed no anti-BVDV activity. Weak antiviral activity was noted against other flaviviruses, including West Nile virus, Dengue type 2, and yellow fever virus. These results indicate that PSI-6130 is a specific inhibitor of HCV. PSI-6130 showed little or no cytotoxicity against various cell types, including human peripheral blood mononuclear and human bone marrow progenitor cells. No mitochondrial toxicity was observed with PSI-6130. The reduced activity against the RdRp S282T mutant suggests that PSI-6130 is an inhibitor of replicon RNA synthesis. Finally, the no-effect dose for mice treated i.p. with PSI-6130 for six consecutive days was ≥ 100 mg/kg per day.

IT 817204-33-4, PSI 6130

RL: ADV (Adverse effect, including toxicity); DMA (Drug mechanism of action); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

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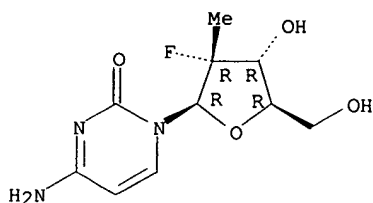
08/082,315

(PSI-6130 inhibition of hepatitis C replicon RNA synthesis)

RN 817204-33-4 CAPLUS

CN Cytidine, 2'-deoxy-2'-fluoro-2'-methyl-, (2'R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



RE.CNT 36 THERE ARE 36 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 2 OF 4 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2006:103884 CAPLUS

DN 144:171198

TI Preparation of alkyl-substituted 2-deoxy-2-fluoro-D-ribofuranosyl pyrimidine and purine nucleoside analogs via condensation of the lactone to nucleosides as potential antiviral agents

IN Wang, Peiyuan; Stec, Wojciech; Clark, Jeremy; Chun, Byoung-Kwon; Shi, Junxing; Du, Jinfa

PA Pharmasset, Inc., USA

SO PCT Int. Appl., 34 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----------------------|--|----------|-----------------|----------|
| WO 2006012440 | A2 | 20060202 | WO 2005-US25916 | 20050721 |
| WO 2006012440 | A3 | 20060727 | | |
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| RW: | AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | |
| US 2006199783 | A1 | 20060907 | US 2006-353597 | 20060213 |
| PRAI US 2004-589866P | P | 20040721 | | |
| US 2004-608320P | P | 20040909 | | |
| US 2005-185988 | A1 | 20050721 | | |
| OS MARPAT 144:171198 | | | | |
| GI | | | | |

1/353,597
Claims to meth. of making cpds. in my op.

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB A process for preparing of 2-deoxy-2-fluoro-2-methyl-D-ribonolactones, I, wherein R1 and R2 can independently be H, CH3, acetyl, benzoyl, pivaloyl, 4-nitrobenzoyl, 3-nitrobenzoyl, 2-nitrobenzoyl, 4-chlorobenzoyl, 3-chlorobenzoyl, 2-chlorobenzoyl, 4-methylbenzoyl, 3-methylbenzoyl, 2-methylbenzoyl, 4-phenylbenzoyl, benzyl, 4-methoxybenzyl, trityl, trialkylsilyl, t-butyl-dialkylsilyl, t-butyl-diphenylsilyl, TIPDS, THP, MOM, or MEM are prepared and used in the condensation to 2-deoxy-2-fluoro-D-ribofuranosyl pyrimidine and purine nucleoside analogs. Thus, 2-deoxy-2-fluoro-D-ribofuranosyl pyrimidine and purine nucleoside analogs II and III, wherein X is a halogen; Y is N or CH; Z is a halogen, hydroxyl, ether, thiol, thioether, (un)substituted amine or alkyl; R1' is alkyl, vinyl, ethynyl; R2' and R3' can be same or different H, alkyl, arylalkyl, acyl, cyclic acetal such as 2',3'-O-isopropylidene or

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2',3-O-benzylidene, or 2',3'-cyclic carbonate; R4, R5, and R6 are independently H, halogen, hydroxyl, ether, thiol, thioether, N3, (un)substituted amine, (un)substituted amido, alkyl, halogenated alkyl, alkenyl, halogenated alkenyl, alkynyl, halogenated alkynyl, hydroxy alkyl, alkoxy are prepared and are potential anti-HCV agents. Specifically, IV was prepared (no yield, claimed) via condensation, alkylation and stereoselective fluorination reactions and can exhibit potential use as an anti-HCV agent.

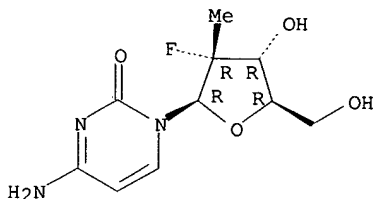
IT 817204-33-4P

RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)
(preparation of alkyl-substituted 2-deoxy-2-fluoro-D-ribofuranosyl pyrimidine and purine nucleoside analogs via condensation of the lactone to nucleosides)

RN 817204-33-4 CAPLUS

CN Cytidine, 2'-deoxy-2'-fluoro-2'-methyl-, (2'R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



L4 ANSWER 3 OF 4 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2005:648160 CAPLUS

DN 143:248607

TI Design, Synthesis, and Antiviral Activity of 2'-Deoxy-2'-fluoro-2'-C-methylcytidine, a Potent Inhibitor of Hepatitis C Virus Replication

AU Clark, Jeremy L.; Hollecker, Laurent; Mason, J. Christian; Stuyver, Lieven J.; Tharnish, Phillip M.; Lostia, Stefania; McBrayer, Tamara R.; Schinazi, Raymond F.; Watanabe, Kyoichi A.; Otto, Michael J.; Furman, Phillip A.; Stec, Wojciech J.; Patterson, Steven E.; Pankiewicz, Krzysztof W.

CS Pharmasset, Inc., Princeton, NJ, 08540, USA

SO Journal of Medicinal Chemistry (2005), 48(17), 5504-5508

CODEN: JMCMAR; ISSN: 0022-2623

PB American Chemical Society

DT Journal

LA English

AB The pyrimidine nucleoside- β -D-2'-deoxy-2'-fluoro-2'-C-methylcytidine (I) was designed as a hepatitis C virus RNA-dependent RNA polymerase (HCV RdRp) inhibitor. The title compound was obtained by a DAST fluorination of N4-benzoyl-1-(2-methyl-3,5-di-O-benzoyl- β -D-arabinofuranosyl)cytosine to provide N4-benzoyl-1-(2-fluoro-2-methyl-3,5-di-O-benzoyl- β -D-ribofuranosyl)cytosine. The protected 2'-C-methylcytidine was obtained as a byproduct from the DAST fluorination and allowed for the preparation of two biol. active compds. from a common precursor. Compound I and 2'-C-methylcytidine were assayed in a sub-genomic HCV replicon assay system and found to be potent and selective inhibitors of HCV replication. Compd. I shows increased inhibitory activity in the HCV replicon assay compared to 2'-C-methylcytidine and low cellular toxicity.

IT 817204-33-4P

RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent)

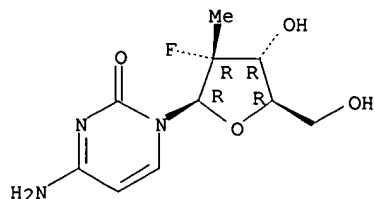
(design, synthesis via fluorination, and antiviral activity of 2'-deoxy-2'-fluoro-2'-C-methylcytidine, a potent inhibitor of Hepatitis C virus replication)

RN 817204-33-4 CAPLUS

CN Cytidine, 2'-deoxy-2'-fluoro-2'-methyl-, (2'R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).

09/982/915



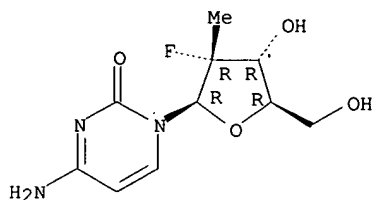
IT 817204-38-9P

RL: SPN (Synthetic preparation); PREP (Preparation)
(design, synthesis via fluorination, and antiviral activity of
2'-deoxy-2'-fluoro-2'-C-methyl-cytidine, a potent inhibitor of
Hepatitis C virus replication)

RN 817204-38-9 CAPLUS

CN Cytidine, 2'-deoxy-2'-fluoro-2'-methyl-, monohydrochloride, (2'R)- (9CI)
(CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



● HCl

RE.CNT 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 4 OF 4 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2005:34765 CAPLUS

DN 142:94074

TI Preparation of modified fluorinated (2'R)-2'-deoxy-2'-fluoro-2'-C-methyl
nucleoside analogs as antiviral agents

IN Clark, Jeremy

PA Pharmasset, Ltd., Barbados

SO PCT Int. Appl., 228 pp.

CODEN: PIXXD2

DT Patent

LA English

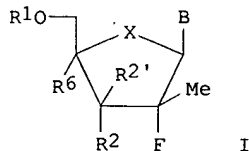
FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
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| | WO 2005003147 | A3 | 20050303 | | |
| | W: | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | | | |
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| | AU 2004253860 | A1 | 20050113 | AU 2004-253860 | 20040421 |
| | CA 2527657 | A1 | 20050113 | CA 2004-2527657 | 20040421 |
| | US 2005009737 | A1 | 20050113 | US 2004-828753 | 20040421 |
| | EP 1633766 | A2 | 20060315 | EP 2004-775900 | 20040421 |
| | R: | AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK, HR | | | |
| | BR 2004010846 | A | 20060627 | BR 2004-10846 | 20040421 |
| | CN 1816558 | A | 20060809 | CN 2004-80019148 | 20040421 |

McIntosh

097982, 315

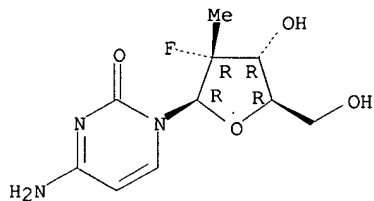
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| JP 2006526629 | T | 20061124 | JP 2006-513231 | 20040421 |
| NO 2005006221 | A | 20051228 | NO 2005-6221 | 20051228 |
| PRAI US 2003-474368P | P | 20030530 | | |
| WO 2004-US12472 | W | 20040421 | | |
| OS MARPAT 142:94074 | | | | |
| GI | | | | |



AB The disclosed invention provides nucleoside analogs I, wherein B is purine and pyrimidine nucleobase; X is O, S, CH₂, Se, NH, N-alkyl, CHW, C(W)₂; W is F, Cl, Br, iodo; R₁ is H, phosphate, H-phosphonate, acyl, Ph, alkyl, carboxyalkylamino, sulfonate ester, peptide, amino acid, sugar residue; R₂ and R₂' are independently H, alkyl, alkenyl, alkynyl, vanyl, N₃, CN, halogen, NO₂, ester, alkoxy, thioalkyl, sulfoxide, sulfonyl; R₆ is alkyl, CN, Me, OMe, OEt, CH₂OH, CH₂F, N₃, CHCN, CH₂N₃, CH₂NH₂, CH₂NHMe, CH₂NMe₂, alkylne; and methods of treating a Flaviviridae infection, including hepatitis C virus, West Nile Virus, yellow fever virus, and a rhinovirus infection in a host, including animals, and especially human, using a (2'R)-2'-deoxy-2'-fluoro-2'-C-Me nucleosides, or a pharmaceutically acceptable salt or prodrug thereof. Thus, (2'R)-2'-deoxy-2'-fluoro-2'-C-methylcytidine was prepared and tested as antiviral agent. The effects the nucleoside analogs tested on human bone marrow cells are reported. (2'R)-2'-deoxy-2'-fluoro-2'-C-methylcytidine shows activity against Rhinovirus, West Nile virus, Yellow Fever virus, and Dengue virus. Cytotoxicity and effect of nucleoside analogs on human bone marrow cells are reported.

IT 817204-33-4P
 RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
 (preparation of modified fluorinated (2'R)-2'-deoxy-2'-fluoro-2'-C-Me nucleoside analogs as antiviral agents)
 RN 817204-33-4 CAPLUS
 CN Cytidine, 2'-deoxy-2'-fluoro-2'-methyl-, (2'R)- (9CI) (CA INDEX NAME)

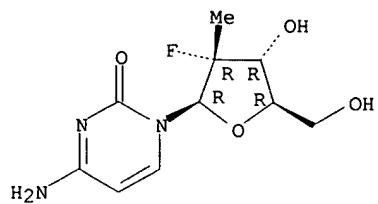
Absolute stereochemistry. Rotation (+).



IT 817204-38-9P
 RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
 (preparation of modified fluorinated (2'R)-2'-deoxy-2'-fluoro-2'-C-Me nucleoside analogs as antiviral agents)
 RN 817204-38-9 CAPLUS
 CN Cytidine, 2'-deoxy-2'-fluoro-2'-methyl-, monohydrochloride, (2'R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).

~~09/982,515~~



● HCl

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~~09/082,315~~

(FILE 'HOME' ENTERED AT 13:15:49 ON 19 MAR 2007)

FILE 'REGISTRY' ENTERED AT 13:16:05 ON 19 MAR 2007

L1 STRUCTURE UPLOADED
L2 0 S L1 SSS SAM
L3 2 S L1 FULL

FILE 'CAPLUS' ENTERED AT 13:17:31 ON 19 MAR 2007

L4 4 S L3

10/828,753

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PASSWORD:

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| COST IN U.S. DOLLARS | SINCE FILE ENTRY | TOTAL SESSION |
|--|------------------|---------------|
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| DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS) | SINCE FILE ENTRY | TOTAL SESSION |
| CA SUBSCRIBER PRICE | 0.00 | -3.12 |

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| COST IN U.S. DOLLARS | SINCE FILE ENTRY | TOTAL SESSION |
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| FULL ESTIMATED COST | 174.80 | 547.44 |
| DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS) | SINCE FILE ENTRY | TOTAL SESSION |
| CA SUBSCRIBER PRICE | 0.00 | -3.12 |

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DICTIONARY FILE UPDATES: 16 MAR 2007 HIGHEST RN 926905-73-9

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<http://www.cas.org/ONLINE/UG/regprops.html>

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L15 STRUCTURE UPLOADED

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SAMPLE SCREEN SEARCH COMPLETED - 10 TO ITERATE

100.0% PROCESSED 10 ITERATIONS 0 ANSWERS
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
BATCH **COMPLETE**
PROJECTED ITERATIONS: 11 TO 389
PROJECTED ANSWERS: 0 TO 0

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10/828,753

L16 0 SEA SSS SAM L15

=> s l15 full

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FULL SCREEN SEARCH COMPLETED - 148 TO ITERATE

100.0% PROCESSED 148 ITERATIONS
SEARCH TIME: 00.00.01

11 ANSWERS

L17 11 SEA SSS FUL L15

=> file caplus

COST IN U.S. DOLLARS

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FULL ESTIMATED COST

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

| SINCE FILE | TOTAL |
|------------|---------|
| ENTRY | SESSION |
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CA SUBSCRIBER PRICE

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FILE LAST UPDATED: 18 Mar 2007 (20070318/ED)

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=> s l17

L18 6 L17

=> d bib abs hitstr 1-6 l18

L18 ANSWER 1 OF 6 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2006:985303 CAPLUS

DN 145:505687

TI Synthesis of 2-deoxy-2-fluoro-2-C-methyl-D-ribofuranoses

AU Clark, Jeremy L.; Mason, J. Christian; Hobbs, Ann J.; Hollecker, Laurent; Schinazi, Raymond F.

CS Pharmasset, Inc., Tucker, GA, USA

SO Journal of Carbohydrate Chemistry (2006), 25(6), 461-470

CODEN: JCACDM; ISSN: 0732-8303

PB Taylor & Francis, Inc.

DT Journal

LA English

AB The synthesis of Me 3,5-di-O-benzoyl-2-deoxy-2-fluoro-2-C-methyl-β-D-ribofuranoside and the conversion to the corresponding 1-O-acetyl-3,5-di-O-benzoyl-2-deoxy-2-fluoro-2-C-methyl-D-ribofuranose and 1,3,5-tri-O-benzoyl-2-deoxy-2-fluoro-2-C-methyl-D-ribofuranose is reported. The key synthetic step is the fluorination of the tertiary center of Me 3,5-di-O-benzyl-2-C-methyl-β-D-arabinofuranoside to provide Me 3,5-di-O-benzyl-2-deoxy-2-fluoro-2-C-methyl-β-D-ribofuranoside.

IT 817204-32-3P 874638-94-5P

RL: SPN (Synthetic preparation); PREP (Preparation)

(synthesis of 2-deoxy-2-fluoro-2-C-methyl-D-ribofuranoses via fluorination of the tertiary center of Me 3,5-di-O-benzyl-2-C-methyl-β-D-arabinofuranosides)

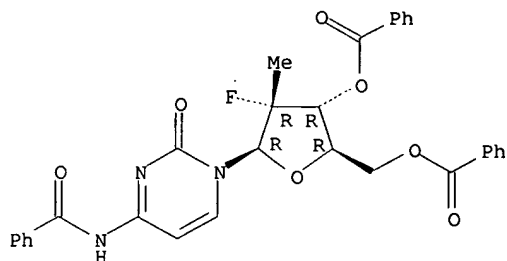
RN 817204-32-3 CAPLUS

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10/828,753

CN Cytidine, N-benzoyl-2'-deoxy-2'-fluoro-2'-methyl-, 3',5'-dibenzoate,
(2'R)- (9CI) (CA INDEX NAME)

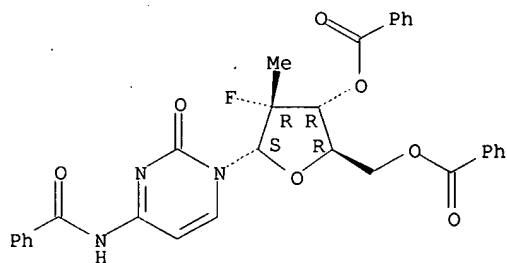
Absolute stereochemistry. Rotation (+).



RN 874638-94-5 CAPLUS

CN Benzamide, N-[1-[(2R)-3,5-di-O-benzoyl-2-deoxy-2-fluoro-2-methyl- α -D-erythro-pentofuranosyl]-1,2-dihydro-2-oxo-4-pyrimidinyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RE.CNT 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L18 ANSWER 2 OF 6 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2006:478128 CAPLUS

DN 145:202057

TI Inhibition of hepatitis C replicon RNA synthesis by β -D-2'-deoxy-2'-fluoro-2'-C-methylcytidine: a specific inhibitor of hepatitis C-virus replication

AU Stuyver, Lieven J.; McBrayer, Tamara R.; Tharnish, Phillip M.; Clark, Jeremy; Hollecker, Laurent; Lostia, Stefania; Nachman, Tammy; Grier, Jason; Bennett, Matthew A.; Xie, Meng-Yu; Schinazi, Raymond F.; Morrey, John D.; Julander, Justin L.; Furman, Phillip A.; Otto, Michael J.

CS Pharmasset Inc, Princeton, NJ, USA

SO Antiviral Chemistry & Chemotherapy (2006), 17(2), 79-87

CODEN: ACCHEH; ISSN: 0956-3202

PB International Medical Press, Ltd.

DT Journal

LA English

AB β -D-2'-Deoxy-2'-fluoro-2'-C-methylcytidine (PSI-6130) is a cytidine analog with potent and selective anti-hepatitis C virus (HCV) activity in the subgenomic HCV replicon assay, 90% effective concentration (EC90) = 4.6 ± 2.0 μ M. The spectrum of activity and cytotoxicity profile of PSI-6130 was evaluated against a diverse panel of viruses and cell types, and against two addnl. HCV-1b replicons. The S282T mutation, which confers resistance to 2'-C-Me adenosine and other 2'-methylated nucleosides, showed only a 6.5-fold increase in EC90. When assayed for activity against bovine diarrhoea virus (BVDV), which is typically used as a surrogate assay to identify compds. active against HCV, PSI-6130 showed no anti-BVDV activity. Weak antiviral activity was noted against other flaviviruses, including West Nile virus, Dengue type 2, and yellow fever virus. These results indicate that PSI-6130 is a specific inhibitor of HCV. PSI-6130 showed little or no cytotoxicity against various cell types, including human peripheral blood mononuclear and human bone marrow progenitor cells. No mitochondrial toxicity was observed with PSI-6130. The

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reduced activity against the RdRp S282T mutant suggests that PSI-6130 is an inhibitor of replicon RNA synthesis. Finally, the no-effect dose for mice treated i.p. with PSI-6130 for six consecutive days was ≥ 100 mg/kg per day.

IT 817204-33-4, PSI 6130

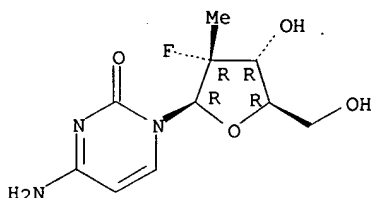
RL: ADV (Adverse effect, including toxicity); DMA (Drug mechanism of action); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(PSI-6130 inhibition of hepatitis C replicon RNA synthesis)

RN 817204-33-4 CAPLUS

CN Cytidine, 2'-deoxy-2'-fluoro-2'-methyl-, (2'R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



RE.CNT 36 THERE ARE 36 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L18 ANSWER 3 OF 6 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2006:269477 CAPLUS

DN 144:312289

TI Preparation of alkyl-substituted 2-deoxy-2-fluoro-D-ribofuranosyl pyrimidine and purine nucleoside analogs via condensation of the lactone to nucleosides as potential antiviral agents

IN Chun, Byoung-Kwon; Wang, Peiyuan

PA Pharmasset, Inc., USA

SO PCT Int. Appl., 74 pp.

COEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|---|------|----------|-----------------|----------|
| PI | WO 2006031725 | A2 | 20060323 | WO 2005-US32406 | 20050913 |
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| | US 2006122146 | A1 | 20060608 | US 2005-225425 | 20050913 |
| PRAI | US 2004-609783P | P | 20040914 | | |
| | US 2004-610035P | P | 20040915 | | |
| | US 2005-666230P | P | 20050329 | | |
| OS | MARPAT 144:312289 | | | | |
| GI | | | | | |

11/225,425
claims to
making

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB A process for preparing of 2-deoxy-2-fluoro-2-methyl-D-ribonolactones, I, wherein R1 and R2 can independently be H, CH3, acetyl, benzoyl, pivaloyl, 4-nitrobenzoyl, 3-nitrobenzoyl, 2-nitrobenzoyl, 4-chlorobenzoyl, 3-chlorobenzoyl, 2-chlorobenzoyl, 4-methylbenzoyl, 3-methylbenzoyl, 2-methylbenzoyl, 4-phenylbenzoyl, benzyl, 4-methoxybenzyl, trityl, trialkylsilyl, t-butyl-dialkylsilyl, t-butyl-diphenylsilyl, TIPDS, THP, MOM, or MEM are prepared and used in the condensation to

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2-deoxy-2-fluoro-D-ribofuranosyl pyrimidine and purine nucleoside analogs. Thus, 2-deoxy-2-fluoro-D-ribofuranosyl pyrimidine and purine nucleoside analogs II and III, wherein X is a halogen; Y is N or CH; Z is a halogen, hydroxyl, ether, thiol, thioether, (un)substituted amine or alkyl; R1' is alkyl, vinyl, ethynyl; R2' and R3' can be same or different H, alkyl, arylalkyl, acyl, cyclic acetal such as 2',3'-O-isopropylidene or 2',3'-O-benzylidene, or 2',3'-cyclic carbonate; R4, R5, and R6 are independently H, halogen, hydroxyl, ether, thiol, thioether, N3, (un)substituted amine, (un)substituted amido, alkyl, halogenated alkyl, alkenyl, halogenated alkenyl, alkynyl, halogenated alkynyl, hydroxy alkyl, alkoxy are prepared and are potential anti-HCV agents. Specifically, IV was prepared in 88 % yield via condensation, alkylation and stereoselective fluorination reactions and can exhibit potential use as an anti-HCV agent.

IT 879551-07-2P

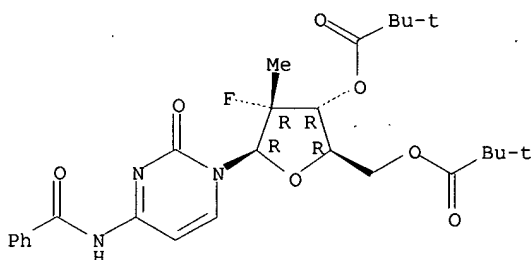
RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)

(preparation of alkyl-substituted 2-deoxy-2-fluoro-D-ribofuranosyl pyrimidine and purine nucleoside analogs via condensation of the lactone to nucleosides)

RN 879551-07-2 CAPLUS

CN Cytidine, N-benzoyl-2'-deoxy-2'-fluoro-2'-methyl-, 3',5'-bis(2,2-dimethylpropanoate), (2'R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L18 ANSWER 4 OF 6 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2006:103884 CAPLUS

DN 144:171198

TI Preparation of alkyl-substituted 2-deoxy-2-fluoro-D-ribofuranosyl pyrimidine and purine nucleoside analogs via condensation of the lactone to nucleosides as potential antiviral agents

IN Wang, Peiyuan; Stec, Wojciech; Clark, Jeremy; Chun, Byoung-Kwon; Shi, Junxing; Du, Jinfa

PA Pharmasset, Inc., USA

SO PCT Int. Appl., 34 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----------------------|--|----------|-----------------|----------|
| PI WO 2006012440 | A2 | 20060202 | WO 2005-US25916 | 20050721 |
| WO 2006012440 | A3 | 20060727 | | |
| W: | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | | | |
| RW: | AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | |
| US 2006199783 | A1 | 20060907 | US 2006-353597 | 20060213 |
| PRAI US 2004-589866P | P | 20040721 | | |
| US 2004-608320P | P | 20040909 | | |
| US 2005-185988 | A1 | 20050721 | | |
| OS MARPAT 144:171198 | | | | |

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB A process for preparing of 2-deoxy-2-fluoro-2-methyl-D-ribonolactones, I, wherein R1 and R2 can independently be H, CH3, acetyl, benzoyl, pivaloyl, 4-nitrobenzoyl, 3-nitrobenzoyl, 2-nitrobenzoyl, 4-chlorobenzoyl, 3-chlorobenzoyl, 2-chlorobenzoyl, 4-methylbenzoyl, 3-methylbenzoyl, 2-methylbenzoyl, 4-phenylbenzoyl, benzyl, 4-methoxybenzyl, trityl, trialkylsilyl, t-butyl-dialkylsilyl, t-butyldiphenylsilyl, TIPDS, THP, MOM, or MEM are prepared and used in the condensation to 2-deoxy-2-fluoro-D-ribofuranosyl pyrimidine and purine nucleoside analogs. Thus, 2-deoxy-2-fluoro-D-ribofuranosyl pyrimidine and purine nucleoside analogs II and III, wherein X is a halogen; Y is N or CH; Z is a halogen, hydroxyl, ether, thiol, thioether, (un)substituted amine or alkyl; R1' is alkyl, vinyl, ethynyl; R2' and R3' can be same or different H, alkyl, arylalkyl, acyl, cyclic acetal such as 2',3'-O-isopropylidene or 2',3'-O-benzylidene, or 2',3'-cyclic carbonate; R4, R5, and R6 are independently H, halogen, hydroxyl, ether, thiol, thioether, N3, (un)substituted amine, (un)substituted amido, alkyl, halogenated alkyl, alkenyl, halogenated alkenyl, alkynyl, halogenated alkynyl, hydroxy alkyl, alkoxy are prepared and are potential anti-HCV agents. Specifically, IV was prepared (no yield, claimed) via condensation, alkylation and stereoselective fluorination reactions and can exhibit potential use as an anti-HCV agent.

IT 817204-32-3P 817204-33-4P 874638-82-1P

874638-94-5P 874638-98-9P

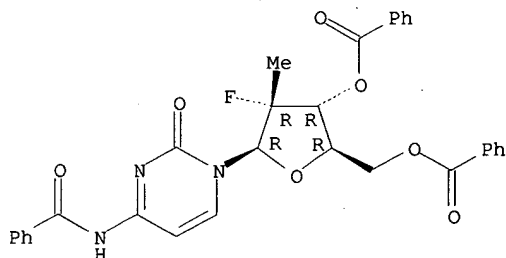
RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)

(preparation of alkyl-substituted 2-deoxy-2-fluoro-D-ribofuranosyl pyrimidine and purine nucleoside analogs via condensation of the lactone to nucleosides)

RN 817204-32-3 CAPLUS

CN Cytidine, N-benzoyl-2'-deoxy-2'-fluoro-2'-methyl-, 3',5'-dibenzoate, (2'R)- (9CI) (CA INDEX NAME)

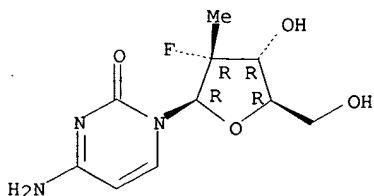
Absolute stereochemistry. Rotation (+).



RN 817204-33-4 CAPLUS

CN Cytidine, 2'-deoxy-2'-fluoro-2'-methyl-, (2'R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).

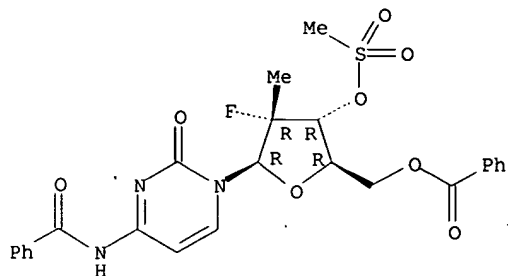


RN 874638-82-1 CAPLUS

CN Benzamide, N-[1-[(2R)-5-O-benzoyl-2-deoxy-2-fluoro-2-methyl-3-O-(methylsulfonyl)-β-D-erythro-pentofuranosyl]-1,2-dihydro-2-oxo-4-pyrimidinyl]- (9CI) (CA INDEX NAME)

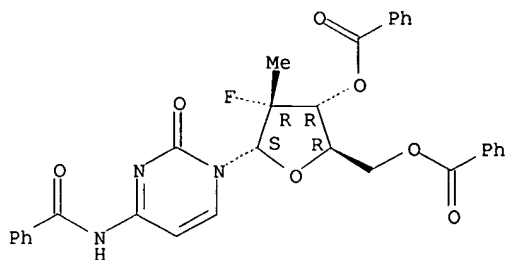
10/828,753

Absolute stereochemistry.



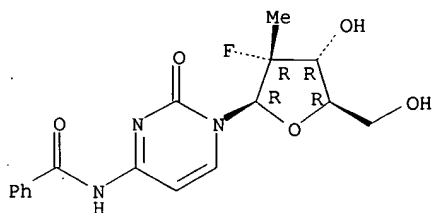
RN 874638-94-5 CAPLUS
CN Benzamide, N-[1-[(2R)-3,5-di-O-benzoyl-2-deoxy-2-fluoro-2-methyl- α -D-erythro-pentofuranosyl]-1,2-dihydro-2-oxo-4-pyrimidinyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 874638-98-9 CAPLUS
CN Cytidine, N-benzoyl-2'-deoxy-2'-fluoro-2'-methyl-, (2'R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L18 ANSWER 5 OF 6 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2005:648160 CAPLUS
DN 143:248607
TI Design, Synthesis, and Antiviral Activity of 2'-Deoxy-2'-fluoro-2'-C-methyl-cytidine, a Potent Inhibitor of Hepatitis C Virus Replication
AU Clark, Jeremy L.; Hollecker, Laurent; Mason, J. Christian; Stuyver, Lieven J.; Tharnish, Phillip M.; Lostia, Stefania; McBrayer, Tamara R.; Schinazi, Raymond F.; Watanabe, Kyoichi A.; Otto, Michael J.; Furman, Phillip A.; Stec, Wojciech J.; Patterson, Steven E.; Pankiewicz, Krzysztof W.
CS Pharmasset, Inc., Princeton, NJ, 08540, USA
SO Journal of Medicinal Chemistry (2005), 48(17), 5504-5508
CODEN: JMCMAR; ISSN: 0022-2623
PB American Chemical Society
DT Journal
LA English
AB The pyrimidine nucleoside- β -D-2'-deoxy-2'-fluoro-2'-C-methylcytidine (I) was designed as a hepatitis C virus RNA-dependent RNA polymerase (HCV RdRp) inhibitor. The title compound was obtained by a DAST fluorination of

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N4-benzoyl-1-(2-methyl-3,5-di-O-benzoyl- β -D-arabinofuranosyl)cytosine to provide N4-benzoyl-1-(2-fluoro-2-methyl-3,5-di-O-benzoyl- β -D-ribofuranosyl)cytosine. The protected 2'-C-methylcytidine was obtained as a byproduct from the DAST fluorination and allowed for the preparation of two biol. active compds. from a common precursor. Compound I and 2'-C-methylcytidine were assayed in a sub-genomic HCV replicon assay system and found to be potent and selective inhibitors of HCV replication. Compd. I shows increased inhibitory activity in the HCV replicon assay compared to 2'-C-methylcytidine and low cellular toxicity.

IT 817204-33-4P

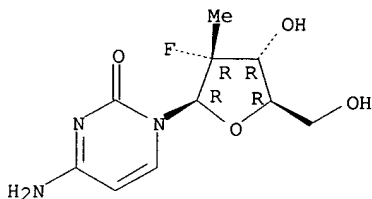
RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent)

(design, synthesis via fluorination, and antiviral activity of 2'-deoxy-2'-fluoro-2'-C-methyl-cytidine, a potent inhibitor of Hepatitis C virus replication)

RN 817204-33-4 CAPLUS

CN Cytidine, 2'-deoxy-2'-fluoro-2'-methyl-, (2'R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



IT 863329-66-2P

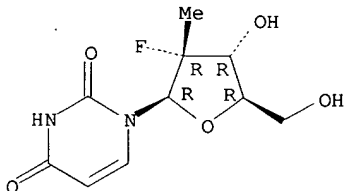
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)

(design, synthesis via fluorination, and antiviral activity of 2'-deoxy-2'-fluoro-2'-C-methyl-cytidine, a potent inhibitor of Hepatitis C virus replication)

RN 863329-66-2 CAPLUS

CN Uridine, 2'-deoxy-2'-fluoro-2'-methyl-, (2'R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



IT 817204-32-3P 863329-65-1P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

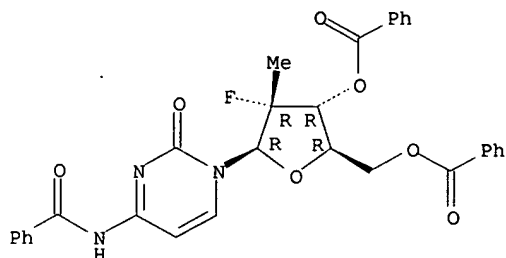
(design, synthesis via fluorination, and antiviral activity of 2'-deoxy-2'-fluoro-2'-C-methyl-cytidine, a potent inhibitor of Hepatitis C virus replication)

RN 817204-32-3 CAPLUS

CN Cytidine, N-benzoyl-2'-deoxy-2'-fluoro-2'-methyl-, 3',5'-dibenzoate, (2'R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).

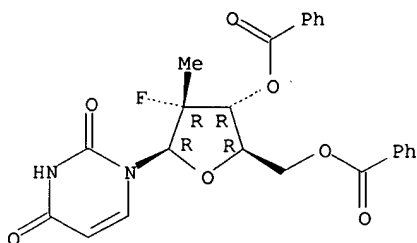
10/828,753



RN 863329-65-1 CAPLUS

CN Uridine, 2'-deoxy-2'-fluoro-2'-methyl-, 3',5'-dibenzoate, (2'R)- (9CI)
(CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



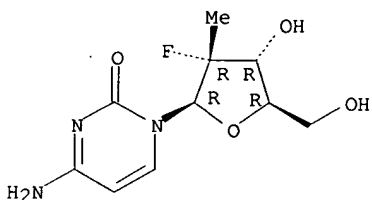
IT 817204-38-9P

RL: SPN (Synthetic preparation); PREP (Preparation)
(design, synthesis via fluorination, and antiviral activity of
2'-deoxy-2'-fluoro-2'-C-methyl-cytidine, a potent inhibitor of
Hepatitis C virus replication)

RN 817204-38-9 CAPLUS

CN Cytidine, 2'-deoxy-2'-fluoro-2'-methyl-, monohydrochloride, (2'R)- (9CI)
(CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



● HCl

RE.CNT 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L18 ANSWER 6 OF 6 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2005:34765 CAPLUS

DN 142:94074

TI Preparation of modified fluorinated (2'R)-2'-deoxy-2'-fluoro-2'-C-methyl
nucleoside analogs as antiviral agents

IN Clark, Jeremy

PA Pharmasset, Ltd., Barbados

SO PCT Int. Appl., 228 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

PATENT NO.

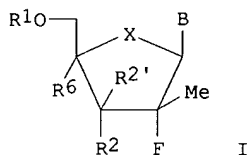
KIND DATE

APPLICATION NO.

DATE

McIntosh

PI WO 2005003147 A2 20050113 WO 2004-US12472 20040421
 WO 2005003147 A3 20050303
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 CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
 GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
 LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI,
 NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY,
 TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
 RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ,
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 AU 2004253860 A1 20050113 AU 2004-253860 20040421
 CA 2527657 A1 20050113 CA 2004-2527657 20040421
 US 2005009737 A1 20050113 US 2004-828753 20040421
 EP 1633766 A2 20060315 EP 2004-775900 20040421
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 BR 2004010846 A 20060627 BR 2004-10846 20040421
 CN 1816558 A 20060809 CN 2004-80019148 20040421
 JP 2006526629 T 20061124 JP 2006-513231 20040421
 NO 2005006221 A 20051228 NO 2005-6221 20051228
 PRAI US 2003-474368P P 20030530
 WO 2004-US12472 W 20040421
 OS MARPAT 142:94074
 GI



AB The disclosed invention provides nucleoside analogs I, wherein B is purine and pyrimidine nucleobase; X is O, S, CH₂, Se, NH, N-alkyl, CHW, C(W)₂; W is F, Cl, Br, iodo; R₁ is H, phosphate, H-phosphonate, acyl, Ph, alkyl, carboxyalkylamino, sulfonate ester, peptide, amino acid, sugar residue; R₂ and R₂' are independently H, alkyl, alkenyl, alkynyl, vinylyl, N₃, CN, halogen, NO₂, ester, alkoxy, thioalkyl, sulfoxide, sulfonyl; R₆ is alkyl, CN, Me, OMe, OEt, CH₂OH, CH₂F, N₃, CHCN, CH₂N₃, CH₂NH₂, CH₂NHMe, CH₂NMe₂, alkylne; and methods of treating a Flaviviridae infection, including hepatitis C virus, West Nile Virus, yellow fever virus, and a rhinovirus infection in a host, including animals, and especially human, using a (2'R)-2'-deoxy-2'-fluoro-2'-C-Me nucleosides, or a pharmaceutically acceptable salt or prodrug thereof. Thus, (2'R)-2'-deoxy-2'-fluoro-2'-C-methylcytidine was prepared and tested as antiviral agent. The effects the nucleoside analogs tested on human bone marrow cells are reported. (2'R)-2'-deoxy-2'-fluoro-2'-C-methylcytidine shows activity against Rhinovirus, West Nile virus, Yellow Fever virus, and Dengue virus. Cytotoxicity and effect of nucleoside analogs on human bone marrow cells are reported.

IT 817204-33-4P

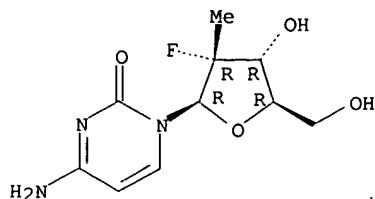
RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
 (preparation of modified fluorinated (2'R)-2'-deoxy-2'-fluoro-2'-C-Me nucleoside analogs as antiviral agents)

RN 817204-33-4 CAPLUS

CN Cytidine, 2'-deoxy-2'-fluoro-2'-methyl-, (2'R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).

10/828,753



IT 817204-38-9P

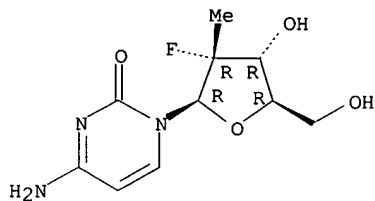
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of modified fluorinated (2'R)-2'-deoxy-2'-fluoro-2'-C-Me nucleoside analogs as antiviral agents)

RN 817204-38-9 CAPLUS

CN Cytidine, 2'-deoxy-2'-fluoro-2'-methyl-, monohydrochloride, (2'R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



● HCl

IT 817204-44-7

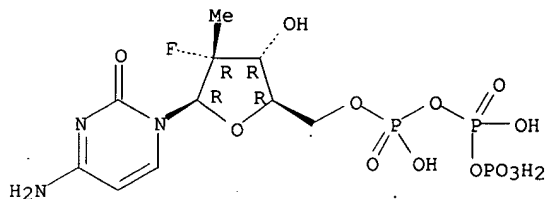
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(preparation of modified fluorinated (2'R)-2'-deoxy-2'-fluoro-2'-C-Me nucleoside analogs as antiviral agents)

RN 817204-44-7 CAPLUS

CN Cytidine 5'-(tetrahydrogen triphosphate), 2'-deoxy-2'-fluoro-2'-methyl-, (2'R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT 817204-32-3P 817204-37-8P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation of modified fluorinated (2'R)-2'-deoxy-2'-fluoro-2'-C-Me nucleoside analogs as antiviral agents)

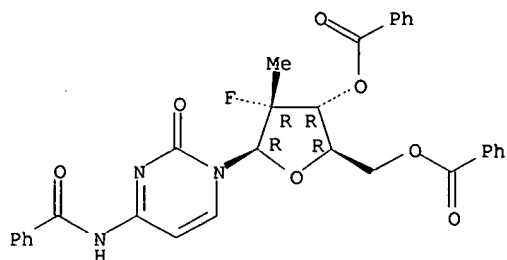
RN 817204-32-3 CAPLUS

CN Cytidine, N-benzoyl-2'-deoxy-2'-fluoro-2'-methyl-, 3',5'-dibenzoate, (2'R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).

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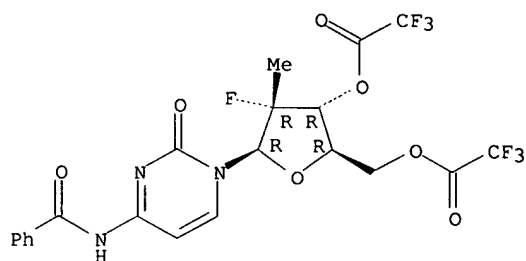
10/828,753



RN 817204-37-8 CAPLUS

CN Cytidine, N-benzoyl-2'-deoxy-2'-fluoro-2'-methyl-, 3',5'-bis(trifluoroacetate), (2'R)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.



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(FILE 'HOME' ENTERED AT 13:15:49 ON 19 MAR 2007)

FILE 'REGISTRY' ENTERED AT 13:16:05 ON 19 MAR 2007

L1 STRUCTURE UPLOADED
L2 0 S L1 SSS SAM
L3 2 S L1 FULL

FILE 'CAPLUS' ENTERED AT 13:17:31 ON 19 MAR 2007

L4 4 S L3

FILE 'REGISTRY' ENTERED AT 13:42:33 ON 19 MAR 2007

L5 STRUCTURE UPLOADED
L6 0 S L5 SSS SAM
L7 0 S L5 FULL

FILE 'REGISTRY' ENTERED AT 14:04:04 ON 19 MAR 2007

L8 STRUCTURE UPLOADED
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L10 0 S L8 FULL
L11 STRUCTURE UPLOADED
L12 0 S L11 SSS SAM
L13 STRUCTURE UPLOADED
L14 0 S L13 SSS SAM

FILE 'REGISTRY' ENTERED AT 14:10:25 ON 19 MAR 2007

L15 STRUCTURE UPLOADED
L16 0 S L15 SSS SAM
L17 11 S L15 FULL

FILE 'CAPLUS' ENTERED AT 14:10:58 ON 19 MAR 2007

L18 6 S L17

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(US20050009737/PN)

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E1 THROUGH E32 ASSIGNED

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|--|------------------|---------------|
| FULL ESTIMATED COST | 35.12 | 754.66 |
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| CA SUBSCRIBER PRICE | -4.68 | -7.80 |

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DICTIONARY FILE UPDATES: 16 MAR 2007 HIGHEST RN 926905-73-9

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<http://www.cas.org/ONLINE/UG/regprops.html>

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L20 32 ANSWERS REGISTRY COPYRIGHT 2007 ACS on STN
IN Nucleotidyltransferase, ribonucleate, RNA-dependent (9CI)
MF Unspecified
CI MAN

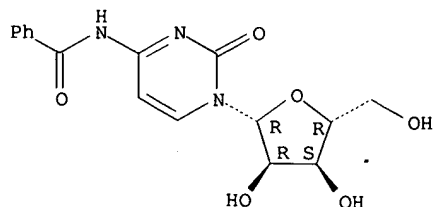
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):31

L20 32 ANSWERS REGISTRY COPYRIGHT 2007 ACS on STN
IN Cytidine, N-benzoyl- (7CI, 9CI)
MF C16 H17 N3 O6
CI COM

Absolute stereochemistry.



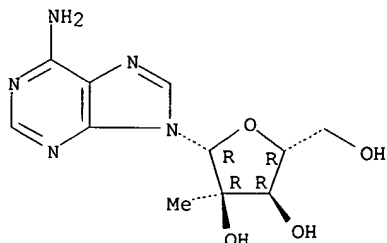
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

McIntosh

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L20 32 ANSWERS REGISTRY COPYRIGHT 2007 ACS on STN
IN Adenosine, 2'-C-methyl- (8CI, 9CI)
MF C11 H15 N5 O4

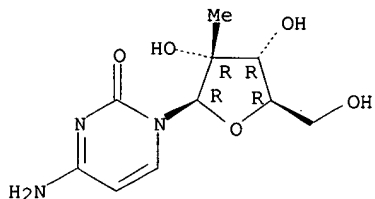
Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

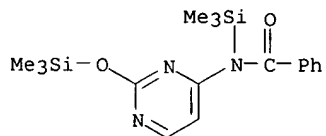
L20 32 ANSWERS REGISTRY COPYRIGHT 2007 ACS on STN
IN Cytidine, 2'-C-methyl- (8CI, 9CI)
MF C10 H15 N3 O5

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

L20 32 ANSWERS REGISTRY COPYRIGHT 2007 ACS on STN
IN Benzamide, N-(trimethylsilyl)-N-[2-[(trimethylsilyl)oxy]-4-pyrimidinyl]-
(9CI)
MF C17 H25 N3 O2 Si2

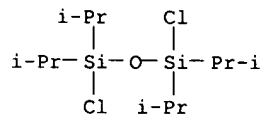


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

L20 32 ANSWERS REGISTRY COPYRIGHT 2007 ACS on STN
IN Disiloxane, 1,3-dichloro-1,1,3,3-tetrakis(1-methylethyl)-
MF C12 H28 Cl2 O Si2
CI COM

McIntosh

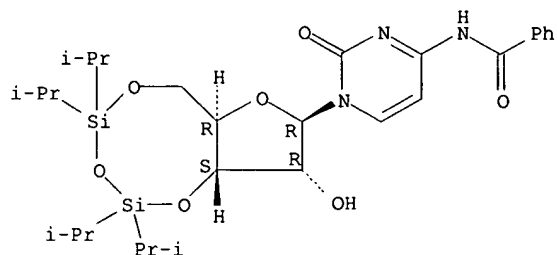
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PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

L20 32 ANSWERS REGISTRY COPYRIGHT 2007 ACS on STN
IN Cytidine, N-benzoyl-3',5'-O-[1,1,3,3-tetrakis(1-methylethyl)-1,3-disiloxanediyl]- (9CI)
MF C28 H43 N3 O7 Si2

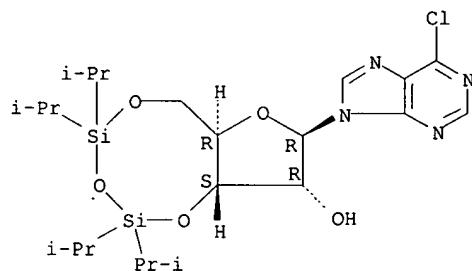
Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

L20 32 ANSWERS REGISTRY COPYRIGHT 2007 ACS on STN
IN 9H-Purine, 6-chloro-9-[3,5-O-[1,1,3,3-tetrakis(1-methylethyl)-1,3-disiloxanediyl]-β-D-ribofuranosyl]- (9CI)
MF C22 H37 Cl N4 O5 Si2

Absolute stereochemistry.



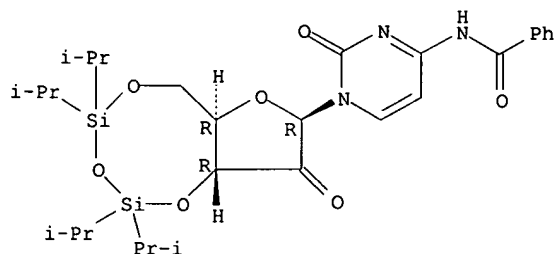
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

L20 32 ANSWERS REGISTRY COPYRIGHT 2007 ACS on STN
IN Cytidine, N-benzoyl-2'-deoxy-2'-oxo-3',5'-O-[1,1,3,3-tetrakis(1-methylethyl)-1,3-disiloxanediyl]- (9CI)
MF C28 H41 N3 O7 Si2

Absolute stereochemistry.

McIntosh

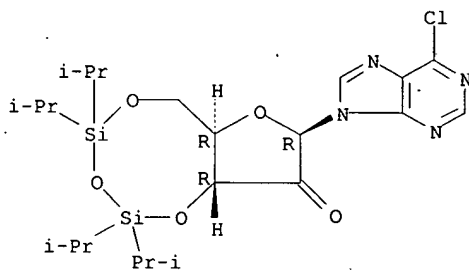
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PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

L20 32 ANSWERS REGISTRY COPYRIGHT 2007 ACS on STN
IN 9H-Purine, 6-chloro-9-[3,5-O-[1,1,3,3-tetrakis(1-methylethyl)-1,3-disiloxanediyl]-β-D-erythro-pentofuranos-2-ulos-1-yl]- (9CI)
MF C22 H35 Cl N4 O5 Si2

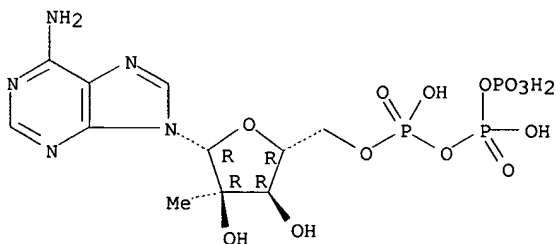
Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

L20 32 ANSWERS REGISTRY COPYRIGHT 2007 ACS on STN
IN Adenosine 5'-(tetrahydrogen triphosphate), 2'-C-methyl- (9CI)
MF C11 H18 N5 O13 P3

Absolute stereochemistry.



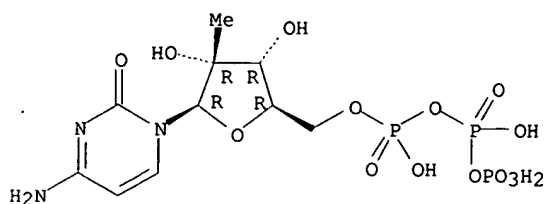
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

L20 32 ANSWERS REGISTRY COPYRIGHT 2007 ACS on STN
IN Cytidine 5'-(tetrahydrogen triphosphate), 2'-C-methyl- (9CI)
MF C10 H18 N3 O14 P3

Absolute stereochemistry.

McIntosh

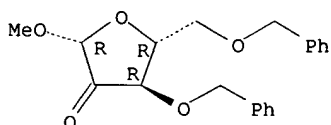
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PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

L20 32 ANSWERS REGISTRY COPYRIGHT 2007 ACS on STN
IN β-D-erythro-Pentofuranosid-2-ulose, methyl 3,5-bis-O-(phenylmethyl)-
(9CI)
MF C20 H22 O5

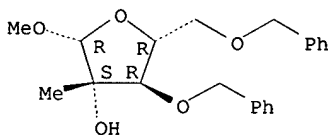
Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

L20 32 ANSWERS REGISTRY COPYRIGHT 2007 ACS on STN
IN β-D-Arabinofuranoside, methyl 2-C-methyl-3,5-bis-O-(phenylmethyl)-
(9CI)
MF C21 H26 O5

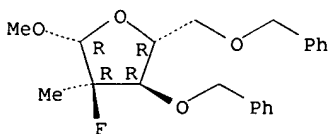
Absolute stereochemistry..



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

L20 32 ANSWERS REGISTRY COPYRIGHT 2007 ACS on STN
IN β-D-erythro-Pentofuranoside, methyl 2-deoxy-2-fluoro-2-methyl-3,5-bis-
O-(phenylmethyl)-, (2R)- (9CI)
MF C21 H25 F O4

Absolute stereochemistry.



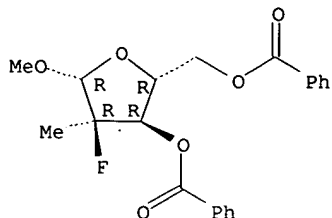
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

McIntosh

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L20 32 ANSWERS REGISTRY COPYRIGHT 2007 ACS on STN
IN β -D-erythro-Pentofuranoside, methyl 2-deoxy-2-fluoro-2-methyl-,
dibenzoate, (2R)- (9CI)
MF C21 H21 F O6

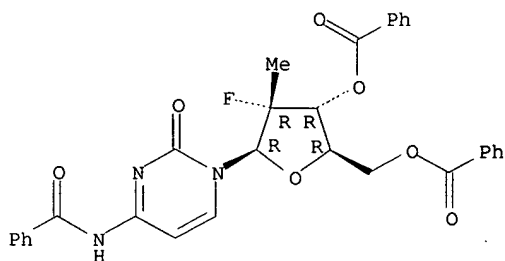
Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

L20 32 ANSWERS REGISTRY COPYRIGHT 2007 ACS on STN
IN Cytidine, N-benzoyl-2'-deoxy-2'-fluoro-2'-methyl-, 3',5'-dibenzoate,
(2'R)- (9CI)
MF C31 H26 F N3 O7

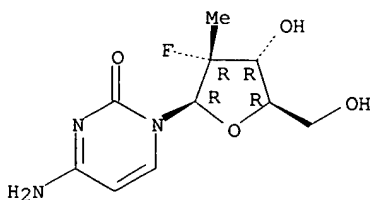
Absolute stereochemistry. Rotation (+).



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

L20 32 ANSWERS REGISTRY COPYRIGHT 2007 ACS on STN
IN Cytidine, 2'-deoxy-2'-fluoro-2'-methyl-, (2'R)- (9CI)
MF C10 H14 F N3 O4
CI COM

Absolute stereochemistry. Rotation (+).



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

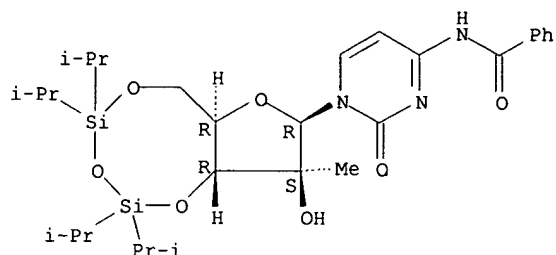
L20 32 ANSWERS REGISTRY COPYRIGHT 2007 ACS on STN
IN Benzamide, N-[1,2-dihydro-1-[2-C-methyl-3,5-O-[1,1,3,3-tetrakis(1-methylethyl)-1,3-disiloxanediyl]- β -D-arabinofuranosyl]-2-oxo-4-pyrimidinyl]- (9CI)

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MF C29 H45 N3 O7 Si2

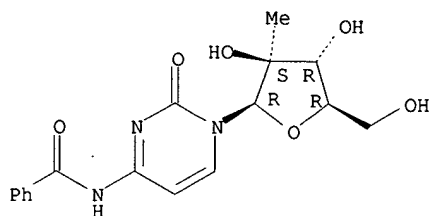
Absolute stereochemistry. Rotation (+).



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

L20 32 ANSWERS REGISTRY COPYRIGHT 2007 ACS on STN
IN Benzamide, N-[1,2-dihydro-1-(2-C-methyl-β-D-arabinofuranosyl)-2-oxo-4-pyrimidinyl]- (9CI)
MF C17 H19 N3 O6

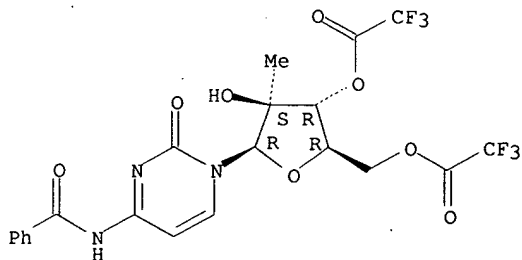
Absolute stereochemistry. Rotation (+).



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

L20 32 ANSWERS REGISTRY COPYRIGHT 2007 ACS on STN
IN Benzamide, N-[1,2-dihydro-1-[2-C-methyl-3,5-bis-O-(trifluoroacetyl)-β-D-arabinofuranosyl]-2-oxo-4-pyrimidinyl]- (9CI)
MF C21 H17 F6 N3 O8

Absolute stereochemistry.



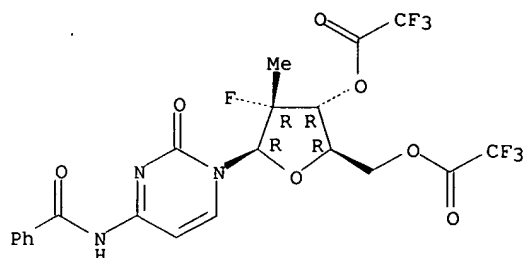
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

McIntosh

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L20 32 ANSWERS REGISTRY COPYRIGHT 2007 ACS on STN
IN Cytidine, N-benzoyl-2'-deoxy-2'-fluoro-2'-methyl-, 3',5'-
bis(trifluoroacetate), (2'R)- (9CI)
MF C21 H16 F7 N3 O7

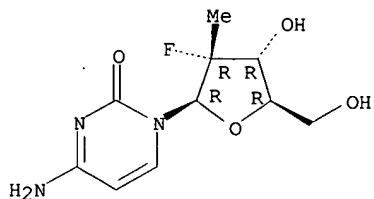
Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

L20 32 ANSWERS REGISTRY COPYRIGHT 2007 ACS on STN
IN Cytidine, 2'-deoxy-2'-fluoro-2'-methyl-, monohydrochloride, (2'R)- (9CI)
MF C10 H14 F N3 O4 . Cl H

Absolute stereochemistry. Rotation (+).

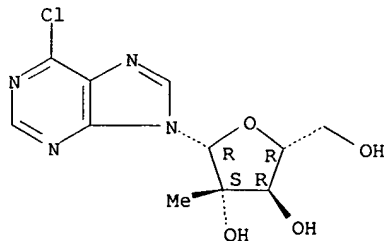


● HCl

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

L20 32 ANSWERS REGISTRY COPYRIGHT 2007 ACS on STN
IN 9H-Purine, 6-chloro-9-(2-C-methyl-β-D-arabinofuranosyl)- (9CI)
MF C11 H13 Cl N4 O4

Absolute stereochemistry.



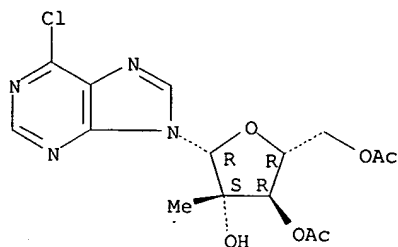
McIntosh

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PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

L20 32 ANSWERS REGISTRY COPYRIGHT 2007 ACS on STN
IN 9H-Purine, 6-chloro-9-[(3,5-di-O-acetyl-2-C-methyl- β -D-arabinofuranosyl)- (9CI)]
MF C15 H17 Cl N4 O6

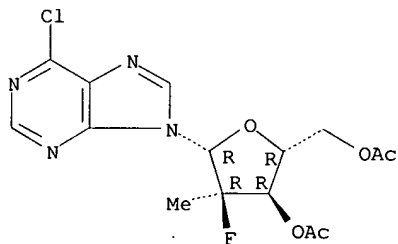
Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

L20 32 ANSWERS REGISTRY COPYRIGHT 2007 ACS on STN
IN 9H-Purine, 6-chloro-9-[(2R)-3,5-di-O-acetyl-2-deoxy-2-fluoro-2-methyl- β -D-erythro-pentofuranosyl]- (9CI)
MF C15 H16 Cl F N4 O5

Absolute stereochemistry.

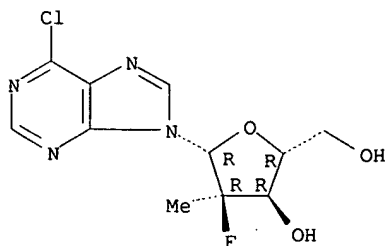


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

L20 32 ANSWERS REGISTRY COPYRIGHT 2007 ACS on STN
IN 9H-Purine, 6-chloro-9-[(2R)-2-deoxy-2-fluoro-2-methyl- β -D-erythro-pentofuranosyl]- (9CI)
MF C11 H12 Cl F N4 O3

Absolute stereochemistry.

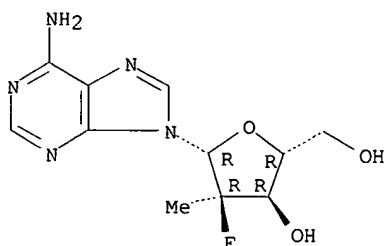
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PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

L20 32 ANSWERS REGISTRY COPYRIGHT 2007 ACS on STN
IN Adenosine, 2'-deoxy-2'-fluoro-2'-methyl-, monohydrochloride, (2'R)- (9CI)
MF C11 H14 F N5 O3 . Cl H

Absolute stereochemistry.

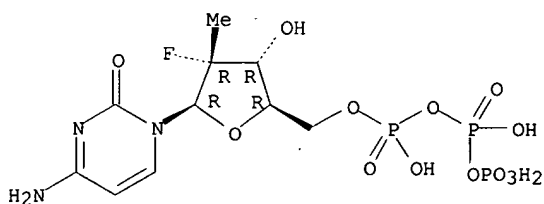


● HCl

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

L20 32 ANSWERS REGISTRY COPYRIGHT 2007 ACS on STN
IN Cytidine 5'-(tetrahydrogen triphosphate), 2'-deoxy-2'-fluoro-2'-methyl-,
(2'R)- (9CI)
MF C10 H17 F N3 O13 P3

Absolute stereochemistry.



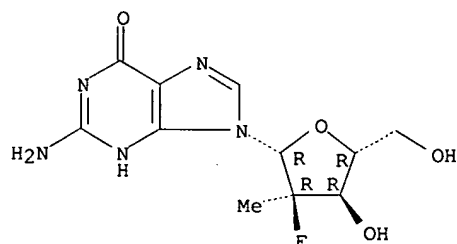
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

L20 32 ANSWERS REGISTRY COPYRIGHT 2007 ACS on STN
IN Guanosine, 2'-deoxy-2'-fluoro-2'-methyl-, (2'R)- (9CI)
MF C11 H14 F N5 O4

Absolute stereochemistry.

McIntosh

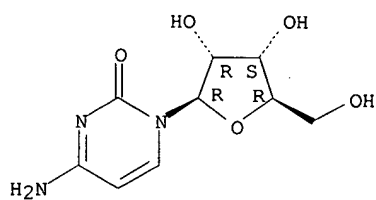
10/828,753



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

L20 32 ANSWERS REGISTRY COPYRIGHT 2007 ACS on STN
IN Cytidine (8CI, 9CI)
MF C9 H13 N3 O5
CI COM

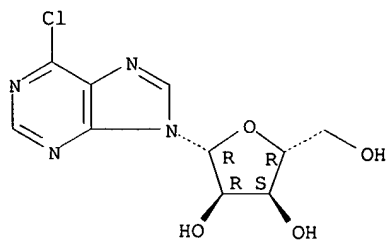
Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

L20 32 ANSWERS REGISTRY COPYRIGHT 2007 ACS on STN
IN 9H-Purine, 6-chloro-9-β-D-ribofuranosyl- (6CI, 7CI, 8CI, 9CI)
MF C10 H11 Cl N4 O4
CI COM

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

ALL ANSWERS HAVE BEEN SCANNED

McIntosh